



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,097	01/18/2002	Jong-Han Kim	678-797 (P10029)	9866
28249	7590	11/01/2005	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553				NGUYEN, HAO X
ART UNIT		PAPER NUMBER		
		2668		

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/052,097	KIM ET AL.
	Examiner Hao X. Nguyen	Art Unit 2668

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 January 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14, 16-21, 23 and 24 is/are rejected.
- 7) Claim(s) 15 and 22 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 January 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Objections

1. Claim 15 is objected to because of the following informalities: It is not clear which event happens first “upon failure toACK signal” or “until a number.....a prescribed number” before “dropping...to be transmitted” is done. Appropriate correction is required.

Claim 22 is objected to because of the following informalities: It is not clear which event happens first “upon failure toACK signal” or “until a number.....a prescribed number” before “dropping packet communication” is done. Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the drawings for claims 1,7,13, and 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not

be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-13, 16-18, 20, 23, and 24 are rejected under 35 U.S.C. 102 (b) as being anticipated by Blakeney, II et al. (US Pat. No. 5,638,412), hereafter Blakeney.

In regards to claim 1,

Referring to Figure 2, Blakeney discloses a service negotiator 20 of a base station 10 that generates a service request message requesting a forward

and reverse traffic channel transmission rates when a traffic channel connection is first originated between a base station and a mobile station (column 2, lines 1-5, and 9-11; column 4, lines 61-63; claim 1 - a controller for generating a data rate request (DRQ) message for requesting transmission of a data rate, when there is a packet to transmit in a state where there is no data communication between the base station and a mobile station).

Referring to Figure 2, Blakeney also discloses a transmitter XMTR 26 that transmits the transmission rate request message generated from the service negotiator 20 to the mobile station 30 (column 8, lines 46-48, and 57-58; claim 1 – and a channel transmitter for transmitting the data rate request message generated from the controller to the mobile station).

In regards to claims 2 and 16,

Blakeney discloses a rate field of service negotiation information message that has a single bit for each associated rate of a forward multiplex option. Blakeney also discloses a base station that can transmit a second request to a mobile station if the mobile station cannot respond immediately. Thus a base station can send a number of data transmission rate messages to a mobile station that comprise of a prescribed number of identical power control bits (column 7, lines 27-30; column 5, lines 65-67; column 6, lines 1 and 2; column 7, lines 48-52; column 4, lines 25-28; claims 2 and 16 – the data rate request message is comprised of a prescribed number of identical power control bits).

In regards to claim 3,

Referring to Figure 2, Blakeney discloses signaling traffic that is provided by a microprocessor (not shown) via an external signaling line to multiplexer 48 of a mobile station 30. Since the roles for service negotiation can be reversed between a base station and a mobile station, signaling traffic can be provided by the same way to multiplexer MUX 22 of a base station 10, to an encoder 24, and then to a channel transmitter XTMR 26.

The channel transmitter XTMR 26 transmits messages through three separate channels. A power control bit for controlling transmission power of the mobile station is transmitted in a signalling traffic channel. Therefore, the channel transmitter XTMR 26 includes a shared power control channel transmitter (column 11, lines 41-43; column 5, lines 65-67; column 6, lines 1 and 2; column 4, lines 16-28; column 7, lines 27-30; claim 3 – the channel transmitter includes a shared power control channel (SPCCH) transmitter for transmitting a power control bit for controlling transmission power of the mobile station).

In regards to claim 4,

Referring to Figure 2, Blakeney discloses service negotiator 20 of a base station provides a channel transmitter XMTR 26 with an ACK message in response to a detection ACK signal of a data rate request message from a mobile station (column 9, lines 24-31; claim 4 – the controller provides the channel transmitter with an ACK (Acknowledgment) message in response to a detection ACK signal of the data rate request message from the mobile station).

In regards to claims 5 and 17,

Blakeney discloses a rate field of service negotiation information message that has a single bit for each associated rate of a forward multiplex option. Blakeney also discloses a base station that can transmit a second response message to a mobile station to propose an alternative data transmission rate if the mobile station cannot respond immediately. Thus a base station can send a number of identical response messages to a mobile station. Therefore, a prescribed number of power control bits (rate bits) are identical (column 7, lines 19-30; column 6, lines 14-17; column 7, lines 48-52; column 4, lines 25-28; claims 5 and 17 – the ACK message is comprised of a prescribed number of identical power control bits).

In regards to claim 6,

Referring to Figures 2 and 3G, Blakeney discloses after transmitting an ACK message a service negotiator 20 would provide an encoder 24, a channel transmitter XMTR 26, and a decoder 20 with a signalling indicative of the agreed upon service configuration. The signalling has control bits for controlling transmission power of the mobile station (column 9, lines 28-36; column 7, lines 27-30; column 11, lines 6-8; claim 6 – controller provides the channel transmitter with a power control bit for controlling transmission power of the mobile station, after transmitting the ACK message).

In regards to claims 7 and 18,

Referring to Figures 2 and 3G, Blakeney also discloses microprocessor (not shown) of a mobile station 30 that generates an external signaling line to be

used for initiating and maintaining a link in a communication system. Therefore, this signal is used for gating on/off reverse signal transmitted to a base station after completion of packet data communication (column 11, lines 41-43 and 6-8; column 9, lines 60-62; claims 7 and 18 - a gating signal generator for generating a gating signal for gating on/off reverse signal transmitted to a base station after completion of packet data communication).

Referring to Figure 2, Blakeney discloses a service negotiator 20 of a base station 10 that generates a service request message requesting a forward and reverse traffic channel transmission rates when a traffic channel connection is first originated between a base station and a mobile station.

Upon receiving the data rate request message, a microprocessor (not shown) generates a gating signal for immediately resuming transmission of a reverse response message (column 2, lines 9-11; column 4, lines 61-63; column 11, lines 41-43; column 9, lines 4-17; claims 7 and 18 – and generating a gating signal for immediately resuming transmission of the reverse signal upon receipt of a data rate request message for requesting transmission of a data rate from the base station when there is no data communication between the base station and the mobile station).

Referring to Figures 2 and 3G, Blakeney also discloses a service negotiator 40 of a mobile station 30 that is used for gating on/off a reverse signal according to a gating signal from a microprocessor (not shown) (column 8, lines

66-67; column 11, lines 41-43; claim 7 - a controller for gating on/off the reverse signal according to the gating signal from the gating signal generator).

Referring to Figure 2, Blakeney further discloses a transmitter XMTR 52 that transmits a reverse signal to the base station according to a control signal from the service negotiator 40 (column 8, lines 66 and 67; column 9, lines 1-14; claim 7 – and a transmitter for gating transmission of the reverse signal transmitted to the base station according to the control signal from the controller).

In regards to claims 9 and 20,

Referring to Figures 2 and 3G, Blakeney discloses a service negotiator 40 of a mobile station 30 that would provides an encoder 38, a channel transmitter XMTR 52, and a decoder 36 with a power control signal for a reverse signal so as to control transmission power of a reverse signal according to a power control bit received from a base station, after receipt of an ACK message responsive to transmission of a reverse signal (column 9, lines 24-31 and 43-47; column 7, lines 27-30; column 11, lines 6-8; claims 9 and 20 – the controller provides the transmitter with a power control signal for the reverse signal so as to control transmission power of the reverse signal according to a power control bit received from the base station, after receipt of an ACK message responsive to transmission of the reverse signal).

In regards to claims 10 and 23,

Blakeney discloses a rate field of service negotiation information message that has a single bit for each associated rate of a forward multiplex option.

Blakeney also discloses a mobile station that can transmit a second request to a base station if the base station cannot respond immediately. Thus a mobile station can send a number of identical data transmission rate messages to a base station. Therefore, a prescribed number of power control bits (rate bits) are identical (column 7, lines 27-30; column 11, lines 6-8; column 7, lines 48-52; claims 10 and 23 – the data rate request message is comprised of a prescribed number of identical power control bits).

In regards to claims 11 and 24,

Blakeney discloses a frame format that is specified for forward messages and reverse messages of a service configuration.

Blakeney also discloses a rate field of service negotiation information message that has a single bit for each associated rate of a forward or reverse multiplex option.

Blakeney further discloses a mobile station that can transmit a second response message to a base station to propose an alternative data transmission rate if the base station cannot respond immediately. Thus a mobile station can send a number of ACK messages to a base station that comprise of a prescribed number of identical control bits (column 10, lines 56-63; column 11, lines 6-8; column 7, lines 27-30 and 48-52; claims 11 and 24 – the ACK message is comprised of a prescribed number of identical power control bits).

In regards to claim 12,

Referring to Figure2, Blakeney discloses a two-way traffic channel that is between a base station 10 and a mobile station 30. A power control bit for controlling transmission power of the mobile station is transmitted in a traffic channel. The two-way communication includes data rate request messages and ACK messages. Therefore a base station 10 transmits a data rate request message and an ACK message over a forward shared power control channel and so a mobile station 30 also receives these messages over a forward shared power control channel (column 4, lines 16-28; column 6, lines 3-17; claim 12 – the data rate request message and the ACK message are received over a forward shared power control channel).

In regards to claim 13,

Referring to Figure 2, Blakeney discloses a base station that transmits a transmission rate request message to a mobile station to propose a service configuration. The mobile station then transmits a service response message back to the base station to accept a service configuration. Next, the base station transmits a service response message for a prescribed time period to acknowledge the agreed upon service configuration to multiplexer 22 (column 2, lines 9-11; column 4, lines 61-63; column 8, lines 1 and 2; column 9, lines 24-31; claim 13 - transmitting a data rate request message to the mobile station to transmit the packet data; transmitting an ACK message to the mobile station for a prescribed time period in response to a detection ACK signal of the data rate request message from the mobile station).

Furthermore a service negotiator 22 provides a signal indicative of an agreed upon service configuration to an encoder 24 and a decoder 20 which encode and decode future messages on a traffic channel in accordance with an agreed upon service configuration (column 9, lines 31-36; claim 13 – and transmitting the packet data along with a power control signal after transmitting the ACK message).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney, in view of Chheda et al (US Pat. No. 6,804,530 B2), hereafter Chheda.

Referring to Figure 2, Blakeney discloses a service negotiator 40 of a mobile station that will transmit data with signaling traffic at an agreed upon traffic channel transmission rate to a transmitter XMTR 52. The signaling traffic includes power control information (paragraphs [0015], [0060], [0070], and [0026]; claims 8 and 19 - the controller provides the transmitter with a power control signal for the reverse signal).

However, Blakeney does not disclose the increase of transmission power of the reverse signal little by little from a predetermined initial access power, upon resumption of the reverse signal, for a prescribed time.

Chheda discloses a base station controller that would transmit a request to a mobile station to increase transmission power levels if it is determined that a mobile station is not in a DTX (discontinuous transmission). A power control signal would increase power of the reversal signal little by little from predetermined initial access power for a prescribed time (column 2, lines 45 and 46; column 1, lines 60 and 61; column 9, lines 1 and 2; column 3, lines 8-10 and 27, 28; claims 8 and 19 - so as to increase transmission power of the reverse signal little by little from predetermined initial access power for a prescribed time, upon resumption of the reverse signal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a power control signal of Blakeney to increase transmission power of the reverse signal little by little from predetermined initial access power for a prescribed time, upon resumption of the reverse signal, as

shown by Chheda, so that data that a base station receives from a mobile station has good frame quality (Chheda; column 11, lines 11-18).

Claims 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakeney, in view of Padovani et al (US Pub. No. 2003/0142656 A1), hereafter Padovani.

In regards to claim 14,

Blakeney discloses a service negotiation that can have a role reversed between a base station and a mobile station (paragraph [0035] and [0036]).

However, it does not disclose the step of dropping the packet data to be transmitted, upon failure to receive a detection ACK signal of the data rate request message from the mobile station.

Referring to Figure 2, Padovani discloses a base station 4 that transmits a paging message to a mobile station 6. A base station 4 then monitors the reverse link DRC (Data Request Channel) for DRC messages from a mobile station 6. If no signal is detected on the DRC channel, a base station 4 can retransmit the paging message until the DRC message is detected. After a predetermined number of retransmission attempts, a base station 4 can terminate the process (paragraph [0073]; claim 14 - the step of dropping the packet data to be transmitted, upon failure to receive a detection ACK signal of the data rate request message from the mobile station).

It would have been obvious to one of ordinary skill in the art at the time of

the invention to modify a packet data transmission method of Blakeney to drop the packet data to be transmitted, upon failure to receive a detection ACK signal of the data rate request message from the mobile station, as shown by Padovani, so no power is wasted if a mobile station is occupied and cannot immediately respond.

In regards to claim 21,

Blakeney discloses a service negotiation that can have a role reversed between a base station and a mobile station (paragraph [0035] and [0036]).

However, it does not disclose the steps that retransmit the reverse signal performed for the prescribed time, upon failure to receive an ACK message responding to transmission of the reverse signal, from the base station; and drop packet communication upon failure to receive the ACK message until a number of transmitting the reverse signal reaches a prescribed number.

Since the role can be reversed between a base station and a mobile station, referring to Figure 2, Padovani also discloses a mobile station 6 that transmits a reverse message to a base station 4. A mobile station 6 then monitors the forward link DRC (Data Request Channel) for DRC messages from a base station 4. If no signal is detected on the DRC channel, a mobile station 6 can retransmit the reverse message until the DRC message is detected. After a predetermined number of retransmission attempts, a mobile station 6 can terminate the process (paragraph [0073]; claim 21 - retransmitting the reverse signal performed for the prescribed time, upon failure to receive an ACK

message responding to transmission of the reverse signal, from the base station; and dropping packet communication upon failure to receive the ACK message until a number of transmitting the reverse signal reaches a prescribed number).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a packet data transmission method of Blakeney to retransmit the reverse signal performed for the prescribed time, upon failure to receive an ACK message responding to transmission of the reverse signal, from the base station; and drop packet communication upon failure to receive the ACK message until a number of transmitting the reverse signal reaches a prescribed number, as shown by Padovani, so no power is wasted if a mobile station is occupied and cannot immediately respond.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Amirijoo et al. (US Pat. No. 6,728,217 B1) discloses System And Method For Modifying The Data Rate For Data Calls In A Cellular Network.

Rezaifar et al. (US Pub. No. 2003/0193907 A1) discloses Method And Apparatus For Distributed Optimal Reverse Link Scheduling Of Resources, Such As Rate And Power, In A Wireless Communication System.

Jalali, A.; Padovani, R.; Pankaj, R. (Vehicular Technology Conference Proceedings, 2000. VTC 2000-Spring Tokyo. 2000 IEEE 51st Volume 3, 15-18

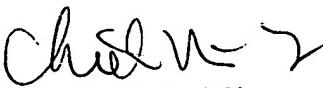
May 2000 Page(s):1854 - 1858 vol.3 discloses Data throughput of CDMA-HDR
a high efficiency-high data rate personal communication wireless system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hao X. Nguyen whose telephone number is 571-272-8195. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hao X. Nguyen
Examiner
Art Unit 2662


CHIEH M. FAN
PRIMARY EXAMINER